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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/533,850 | 11/29/2005 | Dominique Flahaut | 5897-026/NP | 7867 |

27572 7590 03/21/2008
HARNESS, DICKEY & PIERCE, P.L.C.
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BLOOMFIELD HILLS, MI 48303

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| EXAMINER |
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ROE, JESSEE RANDALL

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| ART UNIT | PAPER NUMBER |
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1793

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| MAIL DATE | DELIVERY MODE |
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03/21/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/533,850 | | FLAHAUT, DOMINIQUE | |
| | Examiner | | Art Unit | |
| | Jessee Roe | | 1793 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2005 and 29 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-61 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

- I. Claims 1-22 and claims 55, 60 and 61 as they depend from claims 1-22, drawn to a nickel-chromium-iron alloy having at least one carbide more stable than chromium carbide with hafnium oxide particles.
- II. Claim 23 and 52-53 and claims 55, 60 and 61 as they depend from claim 23, drawn to a nickel-chromium-iron alloy with up to 5% hafnium.
- III. Claim 24 and claims 55, 60 and 61 as they depend from claim 24, drawn to a nickel-chromium-iron alloy with up to 5 weight percent hafnium and hafnium oxide particles.
- IV. Claim 25 and 58-59 and claims 55, 60 and 61 as they depend from claim 25, drawn to a nickel-chromium-aluminum-iron alloy with hafnium particles.
- V. Claims 26-34 and 37-38, 45, 48, 49 and 50 as they depend from claim 26, drawn to a method of manufacturing a nickel-chromium-iron alloy by adding finely divided hafnium particles to a melt to form oxides.

- VI. Claim 35 and claims 37-38, 45 and 48-50 as they depend from claim 35, drawn to a method of manufacturing a nickel-chromium-iron alloy by adding finely divided hafnium particles and varying the level of oxygen in the melt.
- VII. Claim 36 and claims 37-38, 45, and 48-50 as they depend from claim 36, drawn to a method of manufacturing a nickel-chromium-iron alloy by reducing detrimental oxide formed from titanium, zirconium, and aluminum.
- VIII. Claims 39-41 and 45 and 48-50 as they depend from claims 39-40, drawn to a method of manufacturing an oxide dispersion nickel-chromium-iron alloy by using hafnium particles to control gas compositions and permit oxidation of hafnium in situ.
- IX. Claims 42-43 and 44-45 and 48-50 as they depend from claims 42-43, drawn to a method of manufacturing an oxide dispersion nickel-chromium-iron alloy by performing oxidation of beneficial oxide dispersion as hafnium oxide and avoiding detrimental precipitates.
- X. Claim 51, drawn to a method of manufacturing a nickel-chromium-iron alloy by adding hafnium particles to a melt before pouring.
- XI. Claims 56 and 61 as it depends from claim 56, drawn to a nickel-chromium-iron alloy "having a structure and composition substantially as described and illustrated in any one of Figures 1 to 4 of the accompanying

Drawings, wherein the tables represent percentages by weight of the alloy constituents."

- XII. Claims 57 and 61 as it depends from claim 57, drawn to a nickel-chromium-iron alloy "having a structure substantially as described and illustrated in Figures 5 or 6 of the accompanying Drawings."

The inventions listed as Groups I-XIII do not relate to single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical of the Group I invention is the at least one carbide in combination with the hafnium oxide particles, which is not present in the Group II-XII inventions. The special technical feature of the Group II invention is the nickel-chromium-iron alloy with hafnium particles not limited to hafnium oxide which is not present in the Group I or III-XII inventions. The special technical feature of the Group III invention is the nickel-chromium-iron alloy with hafnium oxide particles which is not present in Group I-II and IV-XII inventions. The special technical feature of the Group IV invention is the nickel-chromium-aluminum-iron alloy with the combination of the hafnium particles and aluminum, which is not present in Groups I-III and V-XII inventions. The special technical feature of the Group V invention is the conversion of hafnium to hafnium oxide in the melt, which is not present in the Group I-IV and VI-XII inventions. The special technical feature of the Group VI invention is the varying of the oxygen in the melt, which is not present in the Group I-V and VII-XII inventions. The special technical feature of the Group VII invention is the

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reduction in the formation of detrimental oxide from titanium, zirconium, and aluminum, which is not present in the Group I-VI and VIII-XII inventions. The special technical feature of the Group VIII invention is the use of hafnium to control the partial pressure of a gas or gases and form hafnium oxide in situ, which is not present in the Group I-VII and IX-XII inventions. The special technical feature of the Group IX invention is the dispersion of hafnium oxide without the formation of detrimental precipitates, which is not present in the Group I-VIII and X-XII inventions. The special technical feature of the Group X invention is the addition of hafnium particles to a melt before pouring, which is not present in the Group I-IX and XI-XII inventions. The special technical feature of the Group XI invention is "a nickel-chromium-iron alloy "having a structure and composition substantially as described and illustrated in any one of Figures 1 to 4 of the accompanying Drawings, wherein the tables represent percentages by weight of the alloy constituents.", which is not present in the Group I-X and XII-XII inventions. The special technical feature of the Group XII invention is a nickel-chromium-iron alloy "having a structure substantially as described and illustrated in Figures 5 or 6 of the accompanying Drawings." which is not present in the Group I-XI and XII inventions.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly

and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should the Applicant traverse on the ground that the inventions are not patentably distinct, the Applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the Examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

The Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessee Roe whose telephone number is (571) 272-5938. The examiner can normally be reached on Monday-Friday 7:30 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the


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Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JR

/John P. Sheehan/

Primary Examiner, Art Unit 1793

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| <div>Application Number</div> <div></div> | Application/Control No. | Applicant(s)/Patent under Reexamination | |
| | 10/533,850 | FLAHAUT, DOMINIQUE | |
| | Examiner | Art Unit | |
| | Jessee Roe | 1793 | |